respectfully traversed.

In particular, Applicant asserts that it would not have been obvious at the time of the invention to modify Shimada using the teachings of Yih to teach or suggest a process of fabricating an in-plane switching-type liquid crystal display, as recited in independent claims 15 and 16.

Shimada discloses an LCD device and method of fabrication having a first and second substrate. See, Abstract. As shown in Figures 21 and 22A, the first substrate includes a source line, a gate line, a pixel electrode and an alignment layer. See also, col. 31, line 65+. As further shown in Fig. 22A, the second substrate includes a color filter, a counter electrode and an alignment layer. See, col. 32, line 27+. During fabrication, after the first and second substrates are fabricated, the substrates are attached to each other with a predetermined spacing between, and a liquid crystal material is injected in the gap between the substrates. See, col. 34, lines 22-29. Shimada does not teach or suggest an in-plane switching-type liquid crystal display, as recited in independent claims 15 and 16, nor does the Office Action assert such. Thus, Shimada does not teach or suggest each and every limitation of the claimed invention.

Yih discloses a method of manufacturing a liquid crystal display having two coplanar plates of transparent glass. See, col. 2, lines 41-52. In operation, the Yih method first places an epoxy barrier around the perimeter of the display except for an aperture at one end. See, col. 3, lines 20-25. Next, the display is placed in a partial vacuum in a vacuum chamber and the chamber and display are degassed. See, col. 3, lines 63 to col. 4, line 9. Next, the display is lowered into a liquid crystal bath, and nitrogen is back-filled into the vacuum chamber, thus forcing liquid crystal material into the cavity between the two plates. See, col. 4, lines 10-17. The filled displays are then removed from the partial vacuum and the aperture is filled. That is, the Yih display is removed from a partial vacuum to atmospheric pressure before sealing. As the

only substrates mentioned in Yih are coplanar plates of transparent glass, Yih cannot teach or suggest an in-plane switching-type liquid crystal display. Thus, Yih does not provide for the deficiencies of Shimada.

The Office Action has not established a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, the prior art references must teach or suggest all the claimed limitations, and there must be some motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the reference teachings. See MPEP, §2143, for example. As discussed above, neither Shimada nor Yih, individually or in combination, teach or suggest an in-plane switching-type liquid crystal display, as recited in independent claims 15 and 16.

Furthermore, it would not have been obvious to modify Shimada using the teachings of Yih to use an in-plane switching-type liquid crystal display as the essential features of the invention are different from those described in Shimada. That is, an in-plane switching-type liquid crystal display (also known as an "in-plane response-type liquid-crystal display device"), which is characterized in that it will display black under an electrode where no voltage is applied, requires that the injection and sealing of liquid crystal be conducted in a well-controlled manner as compared to the injection and sealing of the liquid crystal of the Shimada and Yih devices. This is because an unsatisfactory orientation of the liquid crystal will take place around the spacers of response-type liquid-crystal display devices, which will seriously affect the contrast and clarity of the display. See, page 5, line 25+ of the Specification.

In contrast, the present invention uses a means to assure proper liquid crystal orientation by controlling the internal pressure of the panel as pressure rises to atmospheric pressure, and that more specifically, it means that the internal pressure is set to be not less than $-0.3 kfg/cm^2$ compared to atmospheric pressure, as recited in independent claim 16. As neither Shimada or

Yih teach, suggest or even appreciate this problem associated with in-plane switching-type liquid crystal displays much less using in-plane switching-type liquid crystal displays altogether, there can be no motivation to modify Shimada to include an in-plane switching-type liquid crystal display.

Thus, independent claims 15 and 16 define patentable subject matter. Accordingly, withdrawal of the rejection of claims 15 and 16 under 35 U.S.C. §103(a) is respectfully requested.

For the reasons given, Applicant believes that this application is in condition for allowance and Applicant request that the Examiner give the application favorable consideration and permit it to issue as a patent. However, if the Examiner believes that the application can be put in even better condition for allowance, the Examiner is invited to contact Applicant's representative listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. §1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417, and please credit any excess fees to such deposit account.

Respectfully submitted,

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VERSION WITH MARKINGS SHOWING CHANGES MADE

IN THE SPECIFICATION:

The paragraph at page 7, line 21 to page 8, line 4 has been replaced/amended as follows:

--The present invention has been made to solve the problems as above, and its object is to provide an in-plane response-type liquid crystal display device, also known as an in-plane switching-type liquid crystal display, capable of displaying high-quality images, in which light leak to be caused by the spacers is prevented, which ensures a sufficiently high image contrast ratio, and of which the panel surface has no rough appearance. Another object of the invention is to provide a process of fabricating the liquid-crystal display device, for which the production costs are not increased.--

IN THE CLAIMS:

Claims 15 and 16 have been replaced/amended as follows:

15. (Amended) A process of fabricating [a liquid-crystal display device] an in-plane switching-type liquid crystal display, which comprises:

a step of forming a panel by sealing a first substrate having plural electrodes that include at least a scanning signal line, an image signal line[,] and a pixel electrode [and others], and an alignment layer all formed thereon, and a second substrate having a color filter, a light-shielding film and an alignment layer all formed thereon, with a sealant formed between the two substrates and around the outer peripheries of the substrates in such a manner that it partly reaches the edges of the substrates to form an opening though which liquid crystal is to be injected into the space between the sealed substrates, and

a step of setting the panel in a liquid crystal-injecting unit having therein a container filled with liquid crystal, evacuating both the liquid crystal-injecting unit and the panel, putting

the opening of the panel into the liquid crystal in the container, thereafter restoring the liquid crystal-injecting unit to have an atmospheric pressure in that condition so that the liquid crystal is injected into the panel through its opening owing to the inner pressure difference between the unit and the panel, and finally sealing the opening of the panel in such a condition that the panel receives no external pressure.

16. (Amended) A process of fabricating [a liquid-crystal display device] an in-plane switching-type liquid crystal display, which comprises:

a step of forming a panel by sealing a first substrate having plural electrodes that include at least a scanning signal line, an image signal line[,] and a pixel electrode [and others], and an alignment layer all formed thereon, and a second substrate having a color filter, a light-shielding film and an alignment layer all formed thereon, with a sealant formed between the two substrates and around the outer peripheries of the substrates in such a manner that it partly reaches the edges of the substrates to form an opening though which liquid crystal is to be injected into the space between the sealed substrates, and

a step of setting the panel in a liquid crystal-injecting unit having therein a container filled with liquid crystal, evacuating both the liquid crystal-injecting unit and the panel, putting the opening of the panel into the liquid crystal in the container, thereafter restoring the liquid crystal-injecting unit to have an atmospheric pressure in that condition so that the liquid crystal is injected into the panel through its opening owing to the inner pressure difference between the unit and the panel, then keeping the panel as it is until its inner pressure increases to be lower by at most 0.3 kgf/cm^2 than the atmospheric pressure, and finally sealing the opening.